

CLAIMS

1. A method of producing biogas by anaerobic digestion of organic matter, characterised by drying organic matter to a dry solids content of at least 50% by weight TS and subsequently pelletising the same,
 - 10 mixing the pelletised organic matter with a liquid to form a slurry,
 - contacting the slurry with biogas-producing bacteria for digestion under anaerobic conditions in a reactor (2; 102; 202; 302), and
 - digesting the slurry while producing biogas.
- 15 2. A method as claimed in claim 1, in which the organic matter is dried to a dry solids content of at least 70% by weight TS.
3. A method as claimed in claim 1 or 2, in which the dried and pelletised matter is ground before being mixed 20 with said liquid to form the slurry.
4. A method as claimed in any one of the preceding claims, in which the organic matter is ground in such a manner that at least 80% by weight of the matter obtains a particle size of 0.5-3 mm.
- 25 5. A method as claimed in any one of the preceding claims, in which organic matter of a type other than the first-mentioned organic matter is also digested in the reactor (202; 302), at least 10% by weight of the total dry solids introduced into the reactor originating from 30 the dried and pelletised organic matter.
6. A method as claimed in any one of the preceding claims, in which the liquid with which the organic matter is mixed is essentially pure water.
- 35 7. A method as claimed in any one of claims 1-5, in which the liquid with which the organic matter is mixed at least partly is digested sludge which is removed from the reactor (2; 102; 202; 302).

8. A method as claimed in any one of the preceding claims, in which the pelletised organic matter is mixed in a premixing tank (18; 118; 218; 318) with a liquid to form said slurry with a dry solids content of 15-45%
5 by weight TS, and this slurry is then introduced into the reactor to be digested at a dry solids content of 5-10% by weight TS.

9. A method as claimed in any one of the preceding claims, in which the dried and pelletised organic matter
10 is dried green matter, such as dried agricultural products.

10. A method as claimed in any one of the preceding claims, in which the organic matter is ground before being pelletised.

11. A device for producing biogas by anaerobic digestion of organic matter, said device (1; 100; 200; 300) comprising a sealable, essentially gas-tight reactor (2; 102; 202; 302) having an inlet (4; 104; 204; 304) for organic matter and outlets (6, 8; 106, 108; 206, 208; 20 306, 308) for produced biogas and formed digested sludge, characterised in that the device (1; 100; 200; 300) comprises a premixing tank (18; 118; 218; 318) for mixing organic matter dried to a dry solids content of at least 50% by weight TS and pelletised, with a liquid
25 to a slurry, and a feed pipe (4, 26; 104, 126; 204; 304) for feeding the slurry to the reactor (2; 102; 202; 302).

12. A device as claimed in claim 11, in which a mill (14; 114; 214; 314) is arranged for grinding the dried and pelletised organic matter before being introduced
30 into the premixing tank (18; 118; 218; 318).

13. A device as claimed in claim 12, in which the mill (14; 114; 214; 314) is adapted to grind the dried and pelletised organic matter so that at least 80% by weight of the organic matter obtains a particle size of
35 0.5-3 mm.

14. A device as claimed in any one of claims 11-13, in which a supply pipe (122; 222) is arranged for feeding

digested sludge from the reactor (102; 202) to the pre-mixing tank (118; 218).